```
     FILE 'HCAPLUS' ENTERED AT 10:22:56 ON 16 APR 2009
L1         82134 S FURCTOOLIGOSACCHARIDE OR OLIGOFRUCTOSE OR FRUCTOSE OR INULIN
L2         82776 S FRUCTOOLIGOSACCHARIDE OR OLIGOFRUCTOSE OR FRUCTOSE OR INULIN
L3       1463929 S PET OR (COMPANION ANIMAL) OR DOG OR CAT OR RAT OR BIRD OR HOR
L4       1538216 S L2 OR L3
L5          8489 S L2 AND L3
L6        919241 S PREBIOTIC OR CALCIUM
L7           513 S L5 AND L6
L8           342 S L7 AND (PY<2004 OR AY<2004 OR PRY<2004)
L9         14074 S FURCTOOLIGOSACCHARIDE OR OLIGOFRUCTOSE OR FRUCTAN OR INULIN O
L10        14972 S FRUCTOOLIGOSACCHARIDE OR OLIGOFRUCTOSE OR FRUCTAN OR INULIN O
L11          125 S L8 AND L10
L12       122149 S DOG OR CAT
L13           25 S L11 AND L12
```

```
=> file hcaplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.22       0.22

FILE 'HCAPLUS' ENTERED AT 10:22:56 ON 16 APR 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)


Copyright of the articles to which records in this database refer is
held by the publishers listed in the PUBLISHER (PB) field (available
for records published or updated in Chemical Abstracts after December
26, 1996), unless otherwise indicated in the original publications.
The CA Lexicon is the copyrighted intellectual property of the
the American Chemical Society and is provided to assist you in searching
databases on STN.  Any dissemination, distribution, copying, or storing
of this information, without the prior written consent of CAS, is
strictly prohibited.

FILE COVERS 1907 - 16 Apr 2009  VOL 150 ISS 16
FILE LAST UPDATED: 15 Apr 2009  (20090415/ED)

HCAplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2008.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s furctooligosaccharide or oligofructose or fructose or inulin or chicory
             0 FURCTOOLIGOSACCHARIDE
           435 OLIGOFRUCTOSE
         71018 FRUCTOSE
         11210 INULIN
          2069 CHICORY
L1       82134 FURCTOOLIGOSACCHARIDE OR OLIGOFRUCTOSE OR FRUCTOSE OR INULIN OR
               CHICORY

=> s fructooligosaccharide or oligofructose or fructose or inulin or chicory
          1155 FRUCTOOLIGOSACCHARIDE
           435 OLIGOFRUCTOSE
         71018 FRUCTOSE
         11210 INULIN
          2069 CHICORY
L2       82776 FRUCTOOLIGOSACCHARIDE OR OLIGOFRUCTOSE OR FRUCTOSE OR INULIN OR
               CHICORY

=> s pet or (companion animal) or dog or cat or rat or bird or horse or hamster or
mouse or (guinea pig)
         81791 PET
         11629 COMPANION
       1553958 ANIMAL
           154 COMPANION ANIMAL
                 (COMPANION(W)ANIMAL)
         72354 DOG
         54889 CAT
```

```
        766498 RAT
         20570 BIRD
         39853 HORSE
         49291 HAMSTER
        410731 MOUSE
        121134 GUINEA
        159869 PIG
         78071 GUINEA PIG
                 (GUINEA(W)PIG)
L3     1463929 PET OR (COMPANION ANIMAL) OR DOG OR CAT OR RAT OR BIRD OR HORSE
               OR HAMSTER OR MOUSE OR (GUINEA PIG)

=> s l2 or l3
L4     1538216 L2 OR L3

=> s l2 and l3
L5        8489 L2 AND L3

=> s prebiotic or calcium
          4653 PREBIOTIC
        914733 CALCIUM
L6      919241 PREBIOTIC OR CALCIUM

=> s l5 and l6
L7         513 L5 AND L6

=> s l7 and (PY<2004 or AY<2004 or PRY<2004)
      24035168 PY<2004
       4797803 AY<2004
       4270277 PRY<2004
L8         342 L7 AND (PY<2004 OR AY<2004 OR PRY<2004)

=> s furctooligosaccharide or oligofructose or fructan or inulin or chicory
             0 FURCTOOLIGOSACCHARIDE
           435 OLIGOFRUCTOSE
          1620 FRUCTAN
         11210 INULIN
          2069 CHICORY
L9       14074 FURCTOOLIGOSACCHARIDE OR OLIGOFRUCTOSE OR FRUCTAN OR INULIN OR
               CHICORY

=> s fructooligosaccharide or oligofructose or fructan or inulin or chicory
          1155 FRUCTOOLIGOSACCHARIDE
           435 OLIGOFRUCTOSE
          1620 FRUCTAN
         11210 INULIN
          2069 CHICORY
L10      14972 FRUCTOOLIGOSACCHARIDE OR OLIGOFRUCTOSE OR FRUCTAN OR INULIN OR
               CHICORY

=> s l8 and l10
L11        125 L8 AND L10

=> s dog or cat
         72354 DOG
         54889 CAT
L12     122149 DOG OR CAT

=> s l11 and l12
L13         25 L11 AND L12
```

```
=> d l13 1-25 ti abs bib

L13  ANSWER 1 OF 25  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Use of isomalt (mixture of 1,6-GPS and 1,1-GPM) as a prebiotic
     for the production of food and feed additives and medicaments used for the
     treatment of intestinal diseases, among other things
AB   The invention relates to a novel use of a mixture of
     6-O-α-D-glucopyranosyl-D-sorbitol (1,6-GPS) and
     1-O-α-D-glucopyranosyl-D-mannitol (1,1-GPM) as a bifidogenic
     prebiotic optionally containing a probiotic, to be used as or for
     producing a food item, semi-luxury food, fodder, or a medicament.  Said
     medicament is used for the treatment and/or prevention of intestinal
     diseases such as chronic inflammatory intestinal diseases, intestinal
     cancer, bacterial intestinal infections, among other things.
AN   2004:1154570  HCAPLUS <<LOGINID::20090416>>
DN   142:73725
TI   Use of isomalt (mixture of 1,6-GPS and 1,1-GPM) as a prebiotic
     for the production of food and feed additives and medicaments used for the
     treatment of intestinal diseases, among other things
IN   Klingeberg, Michael; Kozianowski, Gunhild; Kunz, Markwart; Theis, Stephan
PA   Suedzucker Aktiengesellschaft Mannheim/ochsenfurt, Germany
SO   PCT Int. Appl., 55 pp.
     CODEN: PIXXD2
DT   Patent
LA   German
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    -------------------    --------
PI   WO 2004112505        A1    20041229    WO 2004-EP6030         20040604 <--
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
             GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
             LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO,
             NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,
             TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
             SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
             SN, TD, TG
     DE 10328180          A1    20050113    DE 2003-10328180       20030616 <--
     AU 2004248895        A1    20041229    AU 2004-248895         20040604 <--
     CA 2527765           A1    20041229    CA 2004-2527765        20040604 <--
     EP 1641354           A1    20060405    EP 2004-739586         20040604 <--
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK
     CN 1802101           A     20060712    CN 2004-80016063       20040604 <--
     BR 2004011528        A     20060801    BR 2004-11528          20040604 <--
     JP 2006527586        T     20061207    JP 2006-515829         20040604 <--
     IN 2005MN01273       A     20081024    IN 2005-MN1273         20051118 <--
     KR 2006030042        A     20060407    KR 2005-724024         20051214 <--
     MX 2005013815        A     20060313    MX 2005-13815          20051216 <--
     NO 2006000185        A     20060315    NO 2006-185            20060111 <--
     US 20060147500       A1    20060706    US 2006-561122         20060202 <--
PRAI DE 2003-10328180     A     20030616  <--
     WO 2004-EP6030       W     20040604
RE.CNT  4     THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13  ANSWER 2 OF 25  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Phytochemical-prebiotic compositions and methods for
```

detoxification and cancer prevention

AB Nutritional compns. capable of reducing the risk of cancer are provided. The nutritional compns. combine the added effects of both a prebiotic source and a phytochem.(s) capable of inducing enzymic activity in mammals to reduce the incidence of cancer. The prebiotic and phytochem. source can be derived from a single plant material, such as chicory.

AN 2004:3487 HCAPLUS <<LOGINID::20090416>>

DN 140:58737

TI Phytochemical-prebiotic compositions and methods for detoxification and cancer prevention

IN Malnoe, Armand; Cavin, Christophe; Offord-Cavin, Elizabeth

PA Switz.

SO U.S. Pat. Appl. Publ., 10 pp.
CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20040001898	A1	20040101	US 2002-180773	20020626 <--
	CA 2489090	A1	20040108	CA 2003-2489090	20030626 <--
	WO 2004002238	A1	20040108	WO 2003-EP6720	20030626 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003280504	A1	20040119	AU 2003-280504	20030626 <--
	EP 1515615	A1	20050323	EP 2003-740343	20030626 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	BR 2003012063	A	20050329	BR 2003-12063	20030626 <--
	CN 1662152	A	20050831	CN 2003-815004	20030626 <--
	CN 100339018	C	20070926		
	JP 2005535314	T	20051124	JP 2004-516680	20030626 <--
	RU 2344619	C2	20090127	RU 2005-101764	20030626 <--
	MX 2004012492	A	20060428	MX 2004-12492	20041210 <--
	ZA 2005000749	A	20060329	ZA 2005-749	20060125 <--
PRAI	US 2002-180773	A	20020626 <--		
	WO 2003-EP6720	W	20030626 <--		

L13 ANSWER 3 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN

TI Prebiotics affect nutrient digestibility but not faecal ammonia in dogs fed increased dietary protein levels

AB Increased dietary protein content and less digestible protein sources can lead to bad fecal odor. The effects of adding prebiotics to dog diets enriched with animal-derived protein sources on apparent digestibilities and fecal ammonia concns. were studied. In 3 consecutive periods, 8 healthy beagle dogs were fed com. diet gradually supplemented with up to 50% meat and bone meal (MBM), greaves meal (GM), or poultry meal (PM). Afterwards, 3% fructooligosaccharides or isomaltooligosaccharides were substituted for 3% of the total diet. The added animal protein sources did not decrease much the apparent N digestibility, but oligosaccharides did. The bacterial N content (as % of dry matter) in feces was highest in the oligosaccharide groups, followed

by the protein-supplemented groups, and lowest in controls. When the apparent N digestibility was corrected for bacterial N, no significant differences were noted anymore, except for the GM group where the corrected N digestibility was still lower after oligosaccharide supplementation. The fecal ammonia levels were increased by added protein or oligosaccharides in the MBM and GM groups, but not in the PM group. When the apparent N digestibility data are interpreted, a correction for bacterial N should be considered, especially when prebiotics are added to the diet. The oligosaccharides did not decrease the fecal ammonia concns. as expected.

AN 2003:1013518 HCAPLUS <<LOGINID::20090416>>
DN 140:216799
TI Prebiotics affect nutrient digestibility but not faecal ammonia in dogs fed increased dietary protein levels
AU Hesta, M.; Roosen, W.; Janssens, G. P. J.; Millet, S.; De Wilde, R.
CS Laboratory of Animal Nutrition, Faculty of Veterinary Medicine, Ghent University, Merelbeke, 9820, Belg.
SO British Journal of Nutrition (2003), 90(6), 1007-1014
CODEN: BJNUAV; ISSN: 0007-1145
PB CABI Publishing
DT Journal
LA English
RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 4 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Faecal bacterial profile, nitrogen excretion and mineral absorption in healthy dogs fed supplemental oligofructose
AB In a cross-over trial, five healthy dogs were fed a dry food without or with 1% (weight/weight) oligofructose to assess any oligofructose-induced effects on the faecal bacterial profile, nitrogen excretion and mineral absorption. The diets were given for a period of 3 wk. Oligofructose feeding significantly raised the number of Bifidobacteria, Streptococci and Clostridia in faeces. The nos. of faecal anaerobic and aerobic bacteria were raised after ingestion of oligofructose. The faecal pH was unchanged. There was no effect of oligofructose feeding on the route of nitrogen excretion which was associated with a lack of effect on faecal ammonium and urinary urea excretion. It is suggested that the absence or presence of an effect of oligofructose on urinary and faecal nitrogen excretion depends on the background composition of the diet, in particular the content of non-digestible, fermentable carbohydrates. In the diets used, the content of non-digestible, fermentable carbohydrates was not measured. Both apparent magnesium and calcium absorption were significantly raised by oligofructose feeding, but phosphorus absorption was unaffected. The data presented may contribute to the qualification of the use of oligofructose in dog foods.

AN 2003:39663 HCAPLUS <<LOGINID::20090416>>
DN 138:204213
TI Faecal bacterial profile, nitrogen excretion and mineral absorption in healthy dogs fed supplemental oligofructose
AU Beynen, A. C.; Baas, J. C.; Hoekemeijer, P. E.; Kappert, H. J.; Bakker, M. H.; Koopman, J. P.; Lemmens, A. G.
CS Department of Nutrition, Utrecht University, Utrecht, Neth.
SO Journal of Animal Physiology and Animal Nutrition (2002), 86(9-10), 298-305
CODEN: JAPNEF; ISSN: 0931-2439
PB Blackwell Verlag GmbH
DT Journal
LA English
RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 5 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Improving condition of elderly pets with nutritional feed additives
AB A method is provided for improving the condition and/or increasing the longevity of elderly pets. The elderly pet is administered an effective amount of a nutritional composition which contains a calcium source and an antioxidant source, such as of vitamins or vitamin precursors which have antioxidant properties. Examples of such vitamins and precursors include β-carotene and vitamin E.
AN 2001:185509 HCAPLUS <<LOGINID::20090416>>
DN 134:192561
TI Improving condition of elderly pets with nutritional feed additives
IN Young, Linda A.; Czarnecki, Gail
PA Societe Des Produits Nestle S.A., Switz.
SO PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001017366	A1	20010315	WO 2000-EP8870	20000908 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	CA 2383715	A1	20010315	CA 2000-2383715	20000908 <--
	CA 2383715	C	20071113		
	BR 2000013879	A	20020507	BR 2000-13879	20000908 <--
	EP 1213971	A1	20020619	EP 2000-964160	20000908 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
	JP 2003508070	T	20030304	JP 2001-521168	20000908 <--
	NZ 517333	A	20030926	NZ 2000-517333	20000908 <--
	IL 148142	A	20050619	IL 2000-148142	20000908 <--
	AU 782494	B2	20050804	AU 2000-75179	20000908 <--
	RU 2267277	C2	20060110	RU 2002-108889	20000908 <--
	MX 2002002195	A	20020918	MX 2002-2195	20020228 <--
	NO 2002001145	A	20020502	NO 2002-1145	20020307 <--
	ZA 2002002740	A	20030708	ZA 2002-2740	20020408 <--
	US 7211280	B1	20070501	US 2002-70777	20020722 <--
	US 20050123643	A1	20050609	US 2004-945768	20040921 <--
PRAI	US 1999-152984P	P	19990909 <--		
	WO 2000-EP8870	W	20000908 <--		
	US 2002-70777	A2	20020722 <--		

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 6 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Method for improving the skin and coat of pets
AB A method for improving or maintaining the skin and coat system of a pet includes administering to the pet a nutritional agent which promotes the growth of bifido- and lactic-bacteria in its gastro-intestinal tract. The nutritional agent may be a prebiotic or a probiotic microorganism, or both. The nutritional agent may be administered together with a long chain fatty acid.
AN 2001:185508 HCAPLUS <<LOGINID::20090416>>

DN 134:192560
TI Method for improving the skin and coat of pets
IN Russell, Terry; Young, Linda A.
PA Societe Des Produits Nestle S.A., Switz.; Russell, Jody
SO PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001017365	A1	20010315	WO 2000-EP8747	20000906 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2383714	A1	20010315	CA 2000-2383714	20000906 <--
	BR 2000013780	A	20020514	BR 2000-13780	20000906 <--
	EP 1213970	A1	20020619	EP 2000-958527	20000906 <--
	EP 1213970	B1	20080611		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
	AU 783678	B2	20051124	AU 2000-70016	20000906 <--
	AT 397868	T	20080715	AT 2000-958527	20000906 <--
	ES 2307531	T3	20081201	ES 2000-958527	20000906 <--
	MX 2002002430	A	20020702	MX 2002-2430	20020306 <--
	ZA 2002002647	A	20030704	ZA 2002-2647	20020404 <--
	HK 1048232	A1	20081031	HK 2002-108938	20021209 <--
PRAI	US 1999-152653P	P	19990907 <--		
	WO 2000-EP8747	W	20000906 <--		

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 7 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Breed-specific canine food formulations
AB Breed-specific dog food formulations that comprise chicken meat as the major ingredient, rice as the predominant (or sole) grain source, fruit and/or vegetable fiber as the primary or sole fiber source, unique fat and antioxidant blend, vitamins, herbs and spices, carotenoids, and no corn or artificial colors, preservatives, flavors or sugars are provided. Applications are discussed for American Eskimo Dog, Bichon Frise, Boston Terrier, Bulldog, Chinese Shar Pei, Chow Chow, Dalmatian, Finnish Spilz, French Bulldog, Keeshond, Lhaso Apso, Poodle, Schipperke, Shiba Inu, Tibetan Spaniel, Tibetan Terrier (nonsporting breeds); Affenpinscher, Brussels Griffon, Cavalier King Charles Spaniel, Chihuahua, Chinese Crested, English Toy Spaniel, Italian Greyhound, Japanese Chin, Maltese, Toy Manchester Terrier, Miniature Pinscher, Papillon, Pekingese, Pomeranian Toy Poodle, Pug, Shih Tzu, Silky Terrier, Yorkshire Terrier (toy breeds). Addnl. applications are discussed for Airedale Terrier, American Staffordshire Terrier, Australian Terrier, Bedlington Terrier, Border Terrier, Bull Terrier, Cairn Terrier, Dandie Dinmont Terrier, Smooth Fox Terrier, Wire Fox Terrier, Irish Terrier, Kerry Blue Terrier, Lakeland Terrier, Standard Manchester Terrier, Miniature Bull Terrier, Miniature Schnauzer, Norfolk Terrier, Norwich Terrier, Scottish Terrier, Sealyham Terrier, Skye Terrier, Soft-Coated Sealyham Terrier, Staffordshire Bull Terrier, Welsh Terrier, West Highland White Terrier.

Applications are also discussed for Akita, Alaskan Malamute, Bernese Mountain Dog, Boxer, Bullmastiff, Doberman Pinscher, Great Schnauzer, Great Dane, Great Pyrenees, Great Swiss Mountain Dog, Komondor, Kuvasz, Mastiff, Newfoundland, Portuguese Water Dog, Rottweiler, Saint Bernard, Samoyed, Siberian Husky, Standard Schnauzer (working dogs); Afghan Hound, Basenji, Basset Hound, Beagle, Black & Tan, Coonhound, Bloodhound, Borzoi, Dachshund, American Foxhound, English Foxhound, Greyhound, Harrier, Ibizan Hound, Irish Wolfhound, Norwegian Elkhound, Otterhound, Petit Basset Griffon, Vendeen, Pharaoh Hound, Rhodesian Ridgeback, Saluki, Scottish Deerhound, Whippet (hound dogs). Applications are also discussed for Australian Cattle Dog, Australian Shepherd, Bearded Collie, Belgian Malinois, Belgian Sheepdog, Belgian Tervuren, Border Collie, Bouvier Des Flandres, Briard, Canaan, Collie, German Shepherd Dog, Old English Sheepdog, Puli, Shetland Sheepdog, Welsh Corgi (herding dogs); Brittany Pointer, German Shorthaired Pointer, German Wirehaired Pointer, Chesapeake Bay Retriever, Curly-Coated Retriever, Flat-Coated Retriever, Golden Retriever, Labrador Retriever, English Setter, Gordon Setter, Irish Setter, American Water Spaniel, Cocker Spaniel, English Cocker Spaniel, English Springer Spaniel, Field Spaniel, Irish Water Spaniel, Sussex Spaniel, Welsh Springer Spaniel, Vizsla, Weimaraner, and Wirehaired Pointing Griffon (sporting dogs).

AN 2000:855658 HCAPLUS <<LOGINID::20090416>>
DN 134:4277
TI Breed-specific canine food formulations
IN Shields, Richard G., Jr.; Bennett, Jeffrey P.
PA Star-Kist Foods, Inc., USA
SO U.S., 15 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6156355	A	20001205	US 1999-245067	19990205 <--
PRAI US 1998-107033P	P	19981102 <--		

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 8 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Antimicrobial prevention and treatment of human immunodeficiency virus and other infectious diseases
AB An improved medical treatment and medicine is provided to quickly and safely resolve HIV and other microbial infections. The inexpensive medicine can be self administered and maintained for the prescribed time. The attractive medicine comprises an antimicrobial concentrate comprising microbe inhibitors, phytochems. or isolates. Desirably, the effective medicine comprises a surfactant and an aqueous carrier or solvent and a nutrient. In the preferred form, the medicine comprises: Echinacea and Commiphora myrrha phytochems., benzalkonium chloride, a sterile water solution, and folic acid.
AN 1998:661494 HCAPLUS <<LOGINID::20090416>>
DN 129:298375
OREF 129:60725a,60728a
TI Antimicrobial prevention and treatment of human immunodeficiency virus and other infectious diseases
IN Squires, Meryl
PA USA
SO PCT Int. Appl., 99 pp.
CODEN: PIXXD2
DT Patent

LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9842188	A1	19981001	WO 1998-US5792	19980324 <--
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 6350784	B1	20020226	US 1997-824041	19970326 <--
	CA 2285394	A1	19981001	CA 1998-2285394	19980324 <--
	AU 9867718	A	19981020	AU 1998-67718	19980324 <--
	AU 727339	B2	20001207		
	BR 9807892	A	20000222	BR 1998-7892	19980324 <--
	EP 980203	A1	20000223	EP 1998-913086	19980324 <--
	EP 980203	B1	20070404		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	EE 9900436	A	20000417	EE 1999-436	19980324 <--
	NZ 500002	A	20010928	NZ 1998-500002	19980324 <--
	JP 2001527541	T	20011225	JP 1998-545926	19980324 <--
	AP 1163	A	20030630	AP 1999-1661	19980324 <--
	W: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW				
	IL 132003	A	20050831	IL 1998-132003	19980324 <--
	SK 285810	B6	20070802	SK 1999-1318	19980324 <--
	PL 196036	B1	20071130	PL 1998-336168	19980324 <--
	NO 9904639	A	19991124	NO 1999-4639	19990924 <--
	NO 325017	B1	20080114		
	MX 9908750	A	20000331	MX 1999-8750	19990924 <--
	BG 63612	B1	20020731	BG 1999-103786	19991007 <--
	IN 2003DE01251	A	20080801	IN 2003-DE1251	20031009 <--
PRAI	US 1997-824041	A	19970326 <--		
	US 1996-600217	A2	19960212 <--		
	US 1996-646988	A2	19960508 <--		
	WO 1998-US5792	W	19980324 <--		
	IN 2001-DE503	A3	20010417 <--		

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 9 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Circulatory kinetics of intravenously injected 238Pu(IV) citrate and 14C-CaNa3-DTPA in mice: comparison with rat, dog, and reference man
AB New ligands for in vivo chelation of Pu(IV) are being synthesized and evaluated in mice for efficacy and toxicity. Biokinetic studies of the new ligands, CaNa3-DTPA, and Pu(IV) are major components of those investigations. Young adult female mice were injected i.v. (i.v.) with 3H-inulin, 14C-CaNa3-DTPA, or 238Pu(IV) citrate to provide baseline data for plasma clearance, tissue uptake, and excretion rates and to determine the dilution volume (VOD) and renal clearance rate (RC) of filterable substances. Published plasma clearance data for i.v.-injected 14C-CaNa3-DTPA and Pu(IV) citrate in Reference Man, dog, and rat were collected. Based on combined data for 3H-inulin and 14C-CaNa3-DTPA, VOD = 17% of body weight and RC = 18 mL kg-1 for mice. Retention of 14C-CaNa3-DTPA in the four species is proportional to body weight and inversely proportional to RC: Integrals of the retention of

14C-CaNa3-DTPA from R(t) = 1.0 to R(t) = 0.05 are 108, 43, 28, and 10 DF min, resp., for Reference Man, dog, rat, and mouse . Clearances of i.v.-injected Pu(IV) citrate from plasma are in the same order: The plasma curve integrals from injection to 1440 min are 840, 640, 280, and 67 DF min, resp., for Reference Man, dog, rat, and mouse. In mice, a large fraction of newly injected Pu(IV) is rapidly transferred to the interstitial water of bulk soft tissue (excluding liver and kidneys), from which it is cleared at the same rate as from the plasma. Rapid plasma clearance, escape into interstitial water (22% ID at 20 min), significant early urinary excretion (8% ID in 12 h), and prompt deposition in liver and skeleton (complete in 12 h) are evidence of inefficient binding to plasma protein (mainly transferrin) of newly injected Pu(IV) in mice. Conversely, slow plasma clearance, little early urinary excretion, and delayed deposition in liver and skeleton reflect more efficient binding by transferrin of newly injected Pu(IV) in Reference Man and dog. Pharmacokinetic parameters (effective dosage, effective concentration) of CaNa3-DTPA, alone or combined with plasma Pu(IV) integrals, yielded only qual. predictions of the relative efficacies of CaNa3-DTPA therapy in four species. The need for improved models of Pu(IV) and ligand biokinetics and the suitability of the three animals for predicting chelation therapy outcomes in humans are discussed.

AN 1997:78324 HCAPLUS <<LOGINID::20090416>>
DN 126:196916
OREF 126:37979a,37982a
TI Circulatory kinetics of intravenously injected 238Pu(IV) citrate and 14C-CaNa3-DTPA in mice: comparison with rat, dog, and reference man
AU Durbin, Patricia W.; Kullgren, Birgitta; Schmidt, Charles T.
CS Chemical Sciences Division, Univ. California, Berkeley, CA, 94720, USA
SO Health Physics (1997), 72(2), 222-235
CODEN: HLTPAO; ISSN: 0017-9078
PB Williams & Wilkins
DT Journal
LA English

L13 ANSWER 10 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Systemic and renal hemodynamic consequences of manipulation of serum calcium and/or parathyroid hormone in the intact conscious mongrel dog
AB Studies were undertaken in conscious mongrel dogs to sep. the systemic and renal hemodynamic effects of alterations in serum Ca2+ from those of parathyroid hormone (PTH) in an intact conscious animal. Blood pressure was measured intra-arterially, cardiac output was determined by dye-dilution or thermodilution, total peripheral resistance (TPR) was calculated from standard formulas, and renal hemodynamics were estimated by the clearance of inulin and p-aminohippurate. Measurements were made before and after a 2-h CaCl2 infusion in dogs (group 1). These animals had previously received a dose of PTH to prevent suppression of PTH during the CaCl2 infusion. Ca2+ and TPR increased significantly. Blood pressure increased but not significantly. Administration of EDTA did not significantly change any systemic hemodynamic variable in thyroparathyroidectomized dogs (group 2). Chelation in dogs with intact parathyroid glands (group 3) reduced mean arterial blood pressure and total peripheral resistance. Renal hemodynamic measurements were not affected. Isolated acute elevation of serum Ca2+, independent of suppression of PTH, increased total peripheral resistance. Decreased serum Ca2+ required normal activity of parathyroids to reduce total peripheral resistance. The renal circulation was resistant to acute manipulation of serum Ca2+ and PTH. CaCl2 infusion to intact dogs (group 1) decreased serum Mg2+ significantly, increased urine flow rate, and decreased urinary PGE2 excretion. Comparisons between group 2 and group 3

revealed a greater decline in serum Mg2+ and urinary PGE2 excretion in group 2 vs. group 3. Elevation of peripheral resistance due to acute Ca2+ elevations was accompanied by decreased serum Mg2+ and decreased renal prostaglandin excretion. Reduction of total peripheral resistance by chelation with EDTA in animals with intact parathyroid glands was accompanied by higher serum Mg2+ and urinary PGE2 excretion. Effects of Ca2+ and(or) PTH may in part be due to changes in serum Mg2+ and prostaglandin homeostasis.

AN 1987:629712 HCAPLUS <<LOGINID::20090416>>
DN 107:229712
OREF 107:36742h,36743a
TI Systemic and renal hemodynamic consequences of manipulation of serum calcium and/or parathyroid hormone in the intact conscious mongrel dog
AU Zawada, Edward T., Jr.; Johnson, Michael; McClung, Daniel; TerWee, Julie; MacKenzie, Thomas
CS Sch. Med., Univ. South Dakota, Sioux Falls, SD, 57105, USA
SO Journal of the American College of Nutrition (1987), 6(2), 131-8
CODEN: JONUDL; ISSN: 0731-5724
DT Journal
LA English

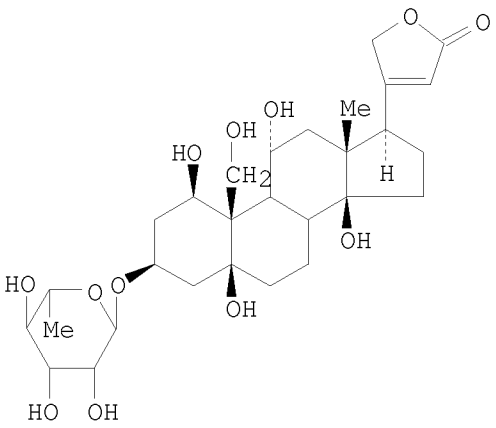
L13 ANSWER 11 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Studies on canine gastric antrum smooth muscle: preparation and characterization of a plasma membrane-enriched fraction
AB A method is described for preparation of large amts. of a plasma membrane (PM)-enriched fraction from the smooth muscle of dog antrum. It consists of preparing microsomes, treating them with ATP + EGTA + Mg, centrifuging in 30% sucrose, and then centrifuging the resulting supernatant in 15% sucrose to yield the plasma membrane-enriched fraction P6. The subcellular fractions obtained at various steps during purification were characterized by: 5'-nucleotidase and phosphodiesterase I as plasma membrane markers; cytochrome c oxidase as an inner mitochondrial marker; NADPH-cytochrome c reductase as a putative endoplasmic reticulum marker; electron microscopy; and polyacrylamide SDS slab gel electrophoresis. The distribution of ATP-dependent and -independent Ca2+ uptake in the presence and absence of N3- and the effect of 5 mM oxalate or 25 mM phosphate on this uptake was also examined The fraction P6 consists of mostly smooth surface vesicles 164.3 nm in diameter and has an exclusion volume of 9.7 μL/mg for [3H] inulin and 11.1 μL/mg for [3H]sucrose. P6 is maximally enriched in the ATP-dependent N3--insensitive Ca2+-uptake capacity and as compared with the postnuclear supernatant (S1) it shows a very small percentage stimulation by oxalate and phosphate. The ATP-dependent Ca2+ uptake by the P6 fraction occurs optimally at pH 7.0-7.4 and is much larger than the ATP-independent Ca2+ uptake. At pH 7.1, the ATP-dependent Ca2+ uptake occurs with a Km of 0.27 μM and a Hill coefficient >2 for Ca2+. Half maximum binding of Ca2+ occurred at 300 μM Ca2+. Ca ionophores A23187 and ionomycin inhibited the ATP-dependent Ca2+ uptake, and if added after the uptake, these caused a release of the accumulated Ca2+. From these and other data, it is concluded that this PM preparation contains a Ca2+-transport system which can lead to formation of a >1000-fold Ca2+ concentration gradient across the vesicle membrane in 1 min when extravesicular Ca2+ concentration is 0.3 μM. Thus, this preparation is an extremely useful material for studying the mechanism of action of the Ca2+ pump in smooth muscle plasma membrane.

AN 1983:537329 HCAPLUS <<LOGINID::20090416>>
DN 99:137329
OREF 99:21073a,21076a
TI Studies on canine gastric antrum smooth muscle: preparation and characterization of a plasma membrane-enriched fraction

AU Grover, A. K.; Oakes, P.; Sipos, S. N.; Kwan, C. Y.; Garfield, R. E.
CS Fac. Health Sci., McMaster Univ., Hamilton, ON, L8N 3Z5, Can.
SO Canadian Journal of Physiology and Pharmacology (1983), 61(8), 927-40
CODEN: CJPPA3; ISSN: 0008-4212
DT Journal
LA English

L13 ANSWER 12 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Divalent ion transport in dogs with experimental chronic renal failure
AB Micropuncture studies were performed to examine the segmental reabsorption of Na+, Ca2+, and Mg2+ in the normal dog kidney (stage I) and in the remnant kidney both in the presence (stage II) and in the absence (stage III) of the contralateral normal kidney. The protocol consisted of an initial phase of hydropenia, followed by 5% extracellular fluid volume expansion in the second phase, followed by parathyroid hormone administration in the final phase. In stage II dogs during hydropenia, proximal and distal transport of Na+, Ca2+, and Mg2+ were similar to those of normal dogs (stage I). Following 5% body weight volume expansion, fractional deliveries to both the proximal and distal puncture sites were increased similarly in stage I and stage II, with a slightly greater increase in stage II animals. In stage III dogs, proximal fractional reabsorption was depressed, as reflected by a marked reduction in proximal tubule fluid to plasma inulin ratios during hydropenia, and the response to volume expansion was accentuated. In the loop segment a constant fraction of the augmented load of Na+, Ca2+, and Mg2+ was reabsorbed in stage III. The percentage of the delivered load that was reabsorbed by this segment was similar in all 3 stages. The diminution in proximal reabsorption in stage III resulted in greater delivery to the distal nephron. The distal reabsorption of a constant fraction of delivered solute resulted in an increase in fractional urinary excretion of Na+, Ca2+, and Mg2+ in stage III. Parathyroid hormone significantly reduced the renal excretion of Ca2+ and Mg2+ in the stage III dogs, indicating the preservation of the renal response to parathyroid hormone in azotemia.
AN 1982:560630 HCAPLUS <<LOGINID::20090416>>
DN 97:160630
OREF 97:26777a,26780a
TI Divalent ion transport in dogs with experimental chronic renal failure
AU Wong, Norman L. M.; Quamme, Gary A.; Dirks, John H.; Sutton, Roger A. L.
CS Dep. Med., Univ. British Columbia, Vancouver, BC, V6T 1W5, Can.
SO Canadian Journal of Physiology and Pharmacology (1982), 60(10), 1296-302
CODEN: CJPPA3; ISSN: 0008-4212
DT Journal
LA English

L13 ANSWER 13 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Ouabain potentiation of rapid cooling contracture of caffeinized cardiac muscles in calcium deprived medium
GI



I

AB The effect of ouabain (I) [630-60-4] on contractures evoked by rapid cooling in the presence of caffeine (rapid cooling caffeine contracture; RCCC) was studied in cardiac muscles, under conditions of a Ca2+ deprived medium. The expts. were carried out at 20°C using cat papillary muscles and frog ventricle strips, with the exception of cooling (2°C). Ouabain (1 + 10-7-1 + 10-5M) markedly potentiated RCCC. An ouabain-induced increase of RCCC did not appear in the resting strips unless the tissues were elec. stimulated. [3H]ouabain occupied a considerable cellular space (0.55) at the appearance of the ouabain potentiation of RCCC (14C-inulin space; 0.20). The appearance of the ouabain potentiation of RCCC was independent of changes in Na+, Ca2+ and ATP contents in the strips. A possible mechanism of the potentiating effect of ouabain on contraction is discussed.
AN 1980:630652 HCAPLUS <<LOGINID::20090416>>
DN 93:230652
OREF 93:36711a,36714a
TI Ouabain potentiation of rapid cooling contracture of caffeinized cardiac muscles in calcium deprived medium
AU Fujino, Sumiko; Fujino, Masahiro
CS Dep. Pharmacol., Hokkaido Inst. Pharm. Sci., Otaru, 047-02, Japan
SO Japanese Journal of Pharmacology (1980), 30(5), 711-20
CODEN: JJPAAZ; ISSN: 0021-5198
DT Journal
LA English

L13 ANSWER 14 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Difference in calcium content of atrial and ventricular muscle
AB The Ca content and inulin space of the atrial and ventricular muscle were determined in the isolated perfused heart of the toad, bullfrog, guinea pig, rat, and cat. In all species studied, the total and cellular Ca content of the atrium were higher than those of the ventricle. A high Ca content of the atrial muscle was also observed in fresh unperfused hearts. The total Ca content of atrial and ventricular muscles increased when the extracellular phosphate concentration was increased. The decay of tissue Ca content with Ca washout was examined in the toad, guinea pig, and rat heart. Approx. 80 percent of total Ca existed as exchangeable Ca in both atrial and ventricular muscles, as determined by the above method. When the extracellular Ca concentration ([Ca]°) was altered in the toad, guinea pig, and rat heart preparation, the cellular Ca content of atrial muscle varied in proportion to [Ca]°, whereas

that of ventricular muscle remained fairly constant at a higher [Ca]° value. The development of contractile tension in the atrial and ventricular muscles at various [Ca]° values corresponded well to these changes in the cellular Ca content, except for the rat ventricle, in which the contractile tension was almost proportional to [Ca]°. The relation between the development of contractile tension and the cellular Ca level or [Ca]° was discussed.
AN 1975:589546 HCAPLUS <<LOGINID::20090416>>
DN 83:189546
OREF 83:29773a,29776a
TI Difference in calcium content of atrial and ventricular muscle
AU Fukuda, Yasuichiro
CS Sch. Med., Chiba Univ., Chiba, Japan
SO Japanese Journal of Physiology (1975), 25(4), 467-79
CODEN: JJPHAM; ISSN: 0021-521X
DT Journal
LA English

L13 ANSWER 15 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Cortical release of labeled compounds during arousal in the cat. Correlations with carbon dioxide, brain temperature, and EEG [electroencephalograph]
AB The release of 45Ca2+, 3H2O, inulin-carboxyl-14C, γ-aminobutyric acid-3H taurine-14C (I), 5-hydroxytryptamine-3H, norepinephrine-3H, and lysine-3H from cerebral cortex into a superfusion medium was studied in vivo, using locally anesthetized, immobilized cats. Peaks in the rate of release of all these compds., from suprasylvian gyrus could be correlated with a diminished amplitude of the cortical EEG and with increases in brain temperature and levels of CO2 in alveolar air. Peaks correlated with pCO2 could still be observed after the topical application of 5 + 10-4M NaCN. Death, produced by an overdose of pentobarbital, resulted in a 45% drop in the release of the 45Ca2+ and I followed by irregular peaks in efflux. Superfusion of the cortical surface with a low Ca2+ medium resulted in very regular oscillations in the efflux of a number of isotopes, including 45Ca and 3H2O. These oscillations, which had a period of .apprx.6 min, were best observed immediately before or after a train of seizures, whereas the efflux pattern during seizures was slightly more irregular. The ratio of 45Ca2+ and 3H2O released at this time also rose and fell in phase with the oscillations in efflux. At each individual seizure, the 45Ca2+-to-3H2O ratio fell to a min. On 2 occasions marked long term changes in the amplitude of the EEG were observed to correlate with a change in the amplitude of the oscillations. Hemodynamic factors are considered to affect the rate of release of isotopes into the superfusate but cortical metabolism is also likely to play a role in controlling the rate of release, especially during the oscillations in efflux in low Ca2+ media.
AN 1975:70985 HCAPLUS <<LOGINID::20090416>>
DN 82:70985
OREF 82:11331a,11334a
TI Cortical release of labeled compounds during arousal in the cat. Correlations with carbon dioxide, brain temperature, and EEG [electroencephalograph]
AU Kaczmarek, L. K.; Adey, W. R.
CS Dep. Anat., Univ. California, Los Angeles, CA, USA
SO Experimental Neurology (1975), 46(1), 57-68
CODEN: EXNEAC; ISSN: 0014-4886
DT Journal
LA English

L13 ANSWER 16 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Efflux of calcium-45(2+) ion and tritium-labeled

γ-aminobutyric acid from cat cerebral cortex

AB The efflux of both 45Ca2+ and GABA-3H from the suprasylvian cortex of the cat was studied in vivo. After preincubating the cortex with radioactivity for 90 min, superfusion with nonradioactive medium was carried out using an 0.8 ml volume changed at 10-min intervals. Increases in the Ca concentration of the medium resulted in greater efflux of both 45Ca2+ and GABA-3H, and the effect on GABA-3H efflux was potentiated by aminooxyacetic acid. The effect of a 1mM increment in Ca2+ concentration was only slightly less than that of a 20mM increment. Adding Mg2+ to the medium did not produce increases comparable to added Ca2+, whereas elec. stimulation of the cortex had no effect on the efflux of either 45Ca2+ or GABA-3H. Thiosemicarbazide, an epileptogenic agent, resulted in a slightly irregular efflux of 45Ca2+ with peaks visible at times of seizure activity. The efflux of 3H2O and inulin-carboxyl-14C could not be correlated with any of the above treatments. The efflux of GABA-3H from the cortex is considered to originate from synaptic terminals and that of 45Ca2+ may be the result of reactions at the membrane triggering the release or turnover of Ca.

AN 1974:68834 HCAPLUS <<LOGINID::20090416>>

DN 80:68834

OREF 80:11127a,11130a

TI Efflux of calcium-45(2+) ion and tritium-labeled γ-aminobutyric acid from cat cerebral cortex

AU Kaczmarek, L. K.; Adey, W. R.

CS Brain Res. Inst., Univ. California, Los Angeles, CA, USA

SO Brain Research (1973), 63, 331-42
CODEN: BRREAP; ISSN: 0006-8993

DT Journal

LA English

L13 ANSWER 17 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN

TI Sodium-independent active potassium reabsorption in proximal tubule of the dog

AB Prior studies of proximal tubule reabsorption failed to distinguish conclusively between a sep. active K+ transport system and K+ movement linked to Na+ reabsorption. To dissociate movement of K+ from Na+ and Ca2+, recollection micropuncture expts. were performed in proximal tubules of intact and thyroparathyroidectomized dogs under 2 different conditions known to inhibit Na+ reabsorption: saline expansion to 5% body weight, and 5 mg/kg acetazolamide. A control hydropenic group was also studied. Tubular concns. of K+, Na+, and Ca2+ were measured by electron probe anal. During initial collections, mean tubular fluid/plasma (TF/P) K+ concentration was 1.07, 1.05, and 1.00 in intact hydropenic, saline, and acetazolamide groups, resp.; fractional reabsorption (FR) of K+ in proximal tubules was 0.35, 0.39, and 0.31, resp. After saline, TF/P inulin concentration fell from 1.81 to 1.34; TF/P K+ concentration, TF/P Na+ concentration, and tubular fluid/ultrafiltrate (TF/UF) Ca2+ concentration did not change, so that FR of all 3 ions fell proportionately. After acetazolamide, however, despite a 24% inhibition of FR of Na+ and Ca2+, TF/P K+ concentration fell to 0.85, so that FR of K+ was unchanged at 0.34. In 3 corresponding groups of thyroparathyroidectomized dogs, similar results were obtained. Acetazolamide inhibited FR of Na+ and Ca2+ by 41%, but TF/P K+ concentration fell from 1.03 to 0.89, so that FR of K+ was unchanged (0.36-0.34). A sep. uphill transport system for K+ in proximal tubules is therefore unmasked by acetazolamide, a drug which selectively inhibits Na+ (and Ca2+) reabsorption. Saline, on the other hand, inhibits net reabsorption of all

3 ions, probably by increasing passive backflux via intercellular channels.
AN 1973:534855 HCAPLUS <<LOGINID::20090416>>
DN 79:134855
OREF 79:21867a,21870a
TI Sodium-independent active potassium reabsorption in proximal tubule of the dog
AU Beck, Laurence H.; Senesky, Dorothy; Goldberg, Martin
CS Sch. Med., Univ. Pennsylvania, Philadelphia, PA, USA
SO Journal of Clinical Investigation (1973), 52(10), 2641-5
CODEN: JCINAO; ISSN: 0021-9738
DT Journal
LA English

L13 ANSWER 18 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Renal effects of thyrocalcitonin in the pig and dog
AB The results of new expts. are given in curves and bar graphs. Thyrocalcitonin (I) of porcine origin was infused in various amts. into 1 renal artery of either pigs or dogs. In normal pigs, excretion of phosphate Pi in the urine was not affected by the lower doses of I which gave some hypocalcemia. Higher doses of I gave some phosphaturia, usually greater in the infused than in the control kidney. Increased urinary Pi was not associated with changes in p-aminohippuric acid or inulin clearance. Excision of the thyroid and (or) parathyroid gland did not appreciably increase the sensitivity of the kidneys of pigs or dogs to low doses of I. I could have a direct action on the kidneys to increase urinary Pi excretion. However, this effect occurred only with doses of I considerably larger (10-100-fold greater) than those required to produce hypocalcemia. Accordingly, the physiol. significance of I in relation to Pi excretion remains uncertain. Since I is secreted when plasma Ca2+ rises, the highest rates of I secretion might occur in states of prolonged hypercalcemia. Theoretically (although there is as yet no evidence) the blood concentration of I might be high enough to interfere with Pi excretion tests used to differentiate between hyperparathyroidism and other causes of hypercalcemia.
AN 1969:400480 HCAPLUS <<LOGINID::20090416>>
DN 71:480
OREF 71:91a,94a
TI Renal effects of thyrocalcitonin in the pig and dog
AU Russell, Robert G. G.; Fleisch, Herbert
CS Schweiz. Forschungsinst., Davos-Platz, Switz.
SO Calcitonin, Proc. Symp. Thyrocalcitonin C Cells (1968), Meeting Date 1967, 297-305. Editor(s): Taylor, Selwyn. Publisher: Springer Verlag, New York, N. Y.
CODEN: 20WCAE
DT Conference
LA English

L13 ANSWER 19 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Absorption, secretion, and precipitation of calcium in the small intestine of the dog
AB Ca transport was studied with in situ segments prepared from the proximal jejunum and terminal ileum. Endogenous Ca secreted into such segments consisted of a dissolved and a precipitated acid-soluble fraction. The precipitate comprised about 1/3 of the secreted Ca. Precipitation also occurred when an isotonic solution containing 40Ca at a concentration of 10 mg./100 ml., 45Ca, and inulin as a nonabsorbed indicator was introduced into the segments. There was significantly more precipitation of 40Ca, which represents both endogenous and exogenous Ca, than of 45Ca which was exogenous only.

Phosphate was secreted and copptd. with the Ca, suggesting that Ca phosphate was at least part of the precipitate The low level of 45Ca in the precipitate suggests that Ca and phosphate of endogenous origin precipitate near the mucosal surface before coming into complete equilibrium with the luminal contents. Precipitation was prevented by adding EDTA to the adsorption solution The jejunum showed net Ca secretion and the ileum net absorption from this solution Flux from lumen to blood was 3-fold greater in the ileum than in the jejunum. Failure to consider Ca precipitation would have caused underestn. of jejunal secretion by about 30% and overestn. of ileal absorption by an equal amount In this cycle of Ca secretion by the jejunum and absorption by the ileum, the precipitate is unabsorbable and may have some role in the formation of endogenous fecal Ca.

AN 1968:94094 HCAPLUS <<LOGINID::20090416>>
DN 68:94094
OREF 68:18122h,18123a
TI Absorption, secretion, and precipitation of calcium in the small intestine of the dog
AU Schedl, Harold P.; Osbaldiston, George W.; Mills, Ivor H.
CS Dep. Invest. Med., Univ. Cambridge, Cambridge, UK
SO American Journal of Physiology (1968), 214(4), 814-19
CODEN: AJPHAP; ISSN: 0002-9513
DT Journal
LA English

L13 ANSWER 20 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Calcium flux into CSF [cerebrospinal fluid] during ventricular and ventriculocisternal perfusion
AB The cat CSF formation rate was measured by dilution of inulin contained in the perfusing fluid. The serum Ca++ concentration was altered by EDTA or Ca gluconate given i.v. When 45Ca++ was given i.v. during ventriculocisternal perfusion, a component of the influx coefficient from blood was reciprocally related to serum Ca++ concentration, consistent with an active or carrier-mediated process; another smaller component of the coefficient was constant, consistent with passive diffusion. When ouabain was added to the perfusate, CSF production and Ca++ influx were reduced, suggesting an influx component related to CSF formation. When Diamox was added to the perfusate, a component of Ca++ influx continued independently of the reduced CSF formation. During perfusion of the ventricular or ventriculocisternal system, about 1/3 of the Ca++ entering CSF was from adjacent brain.

AN 1967:514935 HCAPLUS <<LOGINID::20090416>>
DN 67:114935
OREF 67:21639a,21642a
TI Calcium flux into CSF [cerebrospinal fluid] during ventricular and ventriculocisternal perfusion
AU Graziani, Leonard J.; Kaplan, R. K.; Escriva, Anthony; Katzman, Robert
CS Albert Einstein Coll. of Med., Bronx, NY, USA
SO American Journal of Physiology (1967), 213(3), 629-36
CODEN: AJPHAP; ISSN: 0002-9513
DT Journal
LA English

L13 ANSWER 21 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Stop-flow analysis and effects of osmotic diuresis on renal clearance of 85Sr and 45Ca in the dog
AB Stop-flow analysis and mannitol osmotic diuresis were used for studying tubular reabsorption of 45Ca and 85Sr, and to compare the renal transport

mechanism for these 2 cations. Reabsorptive patterns of Sr and Ca were qual. equal. The urinary concentration of Sr is lowered in the distal tubule at a point along the nephron which is close to, but always about 2 or 3 samples (collected at 3-min. intervals) proximal to the Na min. The urine-to-plasma (U/P) ratios for Sr and Ca (divided by U/P ratios for inulin to correct for water reabsorption) reached a distal low of 0.009-0.011 for Ca and 0.038-0.052 for Sr. The distal tubule can transport these cations against large concentration gradients and Ca is reabsorbed preferentially over Sr at this site. In the proximal stop-flow urine samples, both Sr and Ca concns. were lowered no more than during free flow. During osmotic mannitol diuresis, at urine flows of 0.40-1.5 ml./min., Sr clearance ranged 0.68-1.90 ml./min., and Ca clearance 0.13-0.34 ml./min. for each kidney, with a ratio of Sr/Ca clearance of .apprx.5-6. As urine flow increased, Sr clearance and Ca clearance increased together, but not in the same proportion, the ratio of Sr/Ca clearance decreasing. Ca and Sr clearances increased even when glomerular filtration rate remained constant Since plasma diffusible fractions of both cations decreased, the increase of Sr and Ca clearance was the result of a decreased reabsorption of the ions by the tubules. Tubular reabsorption of Ca and Sr is independent of the tubular reabsorption of water. During osmotic mannitol diuresis, the values for the tubular reabsorption of Sr and Ca were similar to that of Na. It is evident that Ca and Sr (and probably also Mg and Na) compete with each other for a common reabsorptive system in the renal tubule. On the assumption that the distal tubule only slightly modifies urine during osmotic mannitol diuresis, no gross quant. distinction between transport of Sr and Ca in the proximal tubule is evident. However, since the differences between Ca and Sr clearances at the maximum urine flows could not be accounted for by differences in the plasma diffusible fraction of the 2 ions, it is presumed that Ca is preferentially reabsorbed in the proximal convoluted segment of the nephron, in addition to the distal tubule.

AN 1966:510536 HCAPLUS <<LOGINID::20090416>>
DN 65:110536
OREF 65:20618g-h,20619a-c
TI Stop-flow analysis and effects of osmotic diuresis on renal clearance of 85Sr and 45Ca in the dog
AU Mazzuoli, G. F.; Cinotti, G. A.; Stirati, G.; Meredino, S.
CS Univ., Rome
SO Compt. Rend. Congr. Intern. Nephrol., 2nd, Prague,1963 (1964), 698-702
From: Nucl. Sci. Abstr. 20(1), 5(1966).
DT Report
LA English

L13 ANSWER 22 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Renal phosphate and calcium excretion in chronic interstitial nephritis in the dog
AB In 17 dogs with chronic interstitial nephritis (serum urea >80 mg. %) and 23 din. healthy dogs, measurements were made of renal clearances of inulin, PO43-, Ca, and Na. The mechanism of renal phosphate excretion in the diseased animals was affected as follows. The filtration surface of the damaged kidneys was reduced. Despite the rise in the PO43- concentration in the serum the amount of PO43- filtered by the glomeruli was often slightly reduced ($p < 0.01$). In healthy dogs, 85 to 98% of the PO43- filtered through the glomeruli was reabsorbed. In 5 of 16 diseased animals, reabsorption was reduced (50 to 75%). The amount of PO43- excreted through the kidney (mg./min./m.2) was not significantly different in diseased animals from healthy ones. Renal excretion of Ca in diseased animals showed the following changes. Reduced glomeruli Ca filtration was

due to reduced filtration surface of the damaged kidneys. In healthy dogs 95 ± 1.9% of filtered Ca was reabsorbed; in diseased animals only 89.9 ± 4.3% (p <0.01). A close relation existed between damaged Ca reabsorption and damaged Na reabsorption. In many cases, reduction of Ca filtration was compensated by reduced Ca reabsorption. In diseased animals, total renal Ca excretion (mg./min./m.2) was similar to that in healthy animals. In chronic interstitial nephritis in the dog, both the serum phosphate and serum Ca levels often rise. The product of serum Ca and serum PO43- was several-fold normal in 7 of the 16 diseased animals. In such animals CaHPO4 crystallization is probably inhibited.

AN 1966:450586 HCAPLUS <<LOGINID::20090416>>
DN 65:50586
OREF 65:9491g-h,9492a
TI Renal phosphate and calcium excretion in chronic interstitial nephritis in the dog
AU Gaertner, Klaus
CS Univ. Stadt, Frankfurt, Germany
SO Zentralblatt fuer Veterinaermedizin, Reihe A (1966), 13(4), 289-301
CODEN: ZVRAAX; ISSN: 0300-8711
DT Journal
LA German

L13 ANSWER 23 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI The renal excretion of ethylenediaminetetraacetate in the dog
AB The renal excretion of Ca-EDTA was studied in 38 dogs by clearance techniques and competitive and selective tubular transport inhibition. In 60 periods, the renal clearance of EDTA closely approximated the inulin clearance with an EDTA-to-inulin clearance ratio of 1.02 ± 0.07. Probenecid, N'-methylnicotinamide, and cyanine 863 had no specific inhibitory effect on the renal clearance of EDTA. Neither urinary acidification, alkalinization, nor increasing urine flow attributable to a solute diuresis appreciably influenced its excretion. EDTA appears to be excreted by glomerular filtration independent of the primary secretory pathways of acidic or basic compds. and without significant reabsorption. Determination of EDTA clearance represents an addnl. means of measuring glomerular infiltration rate in the dog.

AN 1966:432148 HCAPLUS <<LOGINID::20090416>>
DN 65:32148
OREF 65:5995e-f
TI The renal excretion of ethylenediaminetetraacetate in the dog
AU Forland, Marvin; Pullman, Theodore N.; Lavender, A. R.; Aho, Impi
CS Univ. of Chicago, School of Med., Chicago
SO Journal of Pharmacology and Experimental Therapeutics (1966), 153(1), 142-7
CODEN: JPETAB; ISSN: 0022-3565
DT Journal
LA English

L13 ANSWER 24 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI "True creatinine" and "pseudocreatinine" in blood plasma of the dog
AB Mongrel dogs of either sex were used. The clearances of chromogen and creatinine were compared with the inulin clearance, estimated concomitantly, in dogs anesthetized with chloralose. Bilateral nephrectomy was carried out in 2 dogs. Nonprotein N (NPN), chromogen, and creatinine levels were determined daily until death of the animals. In 2 dogs, the pylorus was ligated and NPN, chromogen and creatinine were determined on the 2nd and 3rd postoperative days, resp. Three ml. of the material containing creatinine (plasma, serum, urine, or working standard) was pipetted into tubes and 9 ml. of saturated picric acid added. Tubes were shaken and

kept in a boiling water bath for 15 sec. Filtration was necessary if the solution was cloudy. For total chromogen determination, 2 ml. of the solution was transferred into a dry tube and 0.1 ml. of 10% NaOH added. The solution was shaken, allowed to stand for 15 min., and absorbance determined at 510 mμ vs. a blank set at 100% transmittance. For pseudocreatinine determination, 2 ml. aliquots of the solution were transferred into centrifuge tubes and to each tube about 0.2 g. of Lloyd reagent was added. The tubes were shaken, allowed to stand for 20 min., centrifuged, and the clear supernatant transferred into clean tubes. To each tube, 0.1 ml. of 10% NaOH was added, the solution mixed, allowed to stand for 15 min. and absorbance determined at 510 mμ vs. a blank. "True creatininine" was calculated as the difference between total chromogen and pseudocreatinine. In the normal dog, true creatinine attains ≤56% of the total chromogen in blood plasma, the remaining 44% being pseudocreatinine. The renal clearance of true creatinine is equal to inulin clearance and hence can be used for estimation of glomerular filtration rate. In the normal dog, chromogen clearance is not suitable for even the approx. evaluation of glomerular filtration rate. Nephrectomy causes the concentration of chromogen in plasma to rise concomitantly with NPN. In the azotemic animal, a consistently smaller fraction of the total chromogen is pseudocreatinine, thus the elevation of chromogen concentration under such conditions is almost entirely the result of the increased true creatinine level. 31 references.

AN 1966:37592 HCAPLUS <<LOGINID::20090416>>
DN 64:37592
OREF 64:7025f-h,7026a-b
TI "True creatinine" and "pseudocreatinine" in blood plasma of the dog
AU Balint, P.; Visy, Maria
CS Univ. Med. School, Budapest
SO Acta Physiologica Academiae Scientiarum Hungaricae (1965), 28(3), 265-72
CODEN: APACAB; ISSN: 0001-6756
DT Journal
LA English

L13 ANSWER 25 OF 25 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Effect of cardiotonic steroids and their localization on the different tubular transport of ions in the kidney, with special regard to the potassium transport mechanism
AB cf. CA 57, 6455d. Two expts. were carried out in attempts to elucidate the mode, direction, and localization of the influence of the tubular transport of K, particularly a possible distal K/H-Na exchange mechanism intermediated by cardioactive glycosides (I); the effect on the transport of Ca was also considered. In 1 series of expts. 68 isolated kidneys of the frog were perfused over 3 sequential periods with I-free (20) and -containing fluids (48 specimens) of various concns. in the measurement of the glomerular filtration rate (GFR) and of the amts. of K, Na, and Ca filtered, resorbed, and (or) secreted. In the 1st perfusion period the kidneys were perfused with a modified Ringer solution, and in the 2nd with a similar solution containing I, convallotoxin (II), 0.8 + 10-6M (24). The 3rd perfusion-period differed from the 2nd only in the higher concentration of II, 6.4 + 10-6M, in 5% EtOH (24 specimens). The aortic and renoportal fluids each contained creatinine, 40 mg. %, enabling the estimation of the GFR as creatinine clearance. In a 2nd series of expts. 18 stop-flow studies were made, involving analyses of several ions and the fluid movement of labeling substances (e.g., inulin (III) and mannitol (IV)) before and after the addition of cardiotonic steroids (i.e.,

I), by way of the renal artery, to 9 nembutalized dogs, the kidneys of which were exposed. For the measurement of the GFR, the animals received a preliminary i.v. injection of pyrogen-free III, 50 mg./kg. body weight, followed 20 min. later by the infusion of III, 0.7 mg./kg. body weight/min. for 30 min. IV, 40 g. (as a 20% aqueous solution)/animal was injected, thereafter, followed by an III-IV infusion (III as before; IV 1-2 g./min./animal). Following the establishment of a constant flow of urine (8-12 mL./kidney/min.) and sampling of the urine for the determination of concns.
during its free flow, a ureter was clamped for 6 min., after which samples of urine were collected and II corresponding to approx. 50 γ/kg. body weight was injected into the renal artery. Ten and 40 min. after this injection the uterer was again occluded and urine samples were collected as before. In the middle of each occlusion period blood was collected from a jugular vein. Blood and urine specimens were assayed for III by a modification of the method of Dick and Davies (J. Clin. Pathol. 2, 67(1949)), and K, Na, and Ca concns. were determined by flame photometry. In this 2nd series of expts., 8 K-loading studies were conducted, consisting of the i.v. administration to 4 animals of KCl, 15 mg./kg. body weight along with the preliminary administration of III, and of KCl, 2.24 mg./kg. weight/min. along with the subsequent infusion of III. In the frog kidney II inhibited Na resorption predominantly and, to a lesser extent, that of Ca, in a dose-dependent fashion in each case. The non-dose-dependent resorption of K was likewise inhibited, and to such an extent that the amount of K excreted exceeded that filtered, tubular secretion contributing to the urinary output of K. Control animals, which excreted less K than was filtered, resorbed 23%. of the filtered K, a value which decreased to 14-15% under the influence of II, without any dose- or concentration-dependency
of II being involved. In the dog kidney the plasma concns. of Na and Ca were not altered by the administration of II; urinary Ca continued to behave like Na, following the administration of II, which caused a parallel increase in both cations in the urine. The urinary excretion of III was decreased under the influence of II. In kidneys infused only with III and KCl, II caused a decrease in the urinary output of K, whereas the output of this cation was increased in kidneys in which the secretion of K was stimulated by KCl, in IV diuresis. The results from the frog-kidney expts. gave no answers regarding the localization of the action of I; the stop-flow expts. yielded only data on the e action of the I in the distal tubules and the collecting ducts (canaliculi). I inhibited the distal resorption process in the cases of K, Na, and Ca without regard to the possible tubular secretion of K, which was non-obligatory. The excretion rate of K was a function of that of Na and was independent of the presence or absence of II in the perfusion solution The facts that the urinary concentration of K was increased during the IV diuresis and decreased after the stimulation of distal secretion of K were explained in a detailed discussion. The results could not be employed to show the existence of a coupled or I-inhibited Na-K exchange mechanism.

AN 1964:47708 HCAPLUS <<LOGINID::20090416>>
DN 60:47708
OREF 60:8426g-h,8427a-f
TI Effect of cardiotonic steroids and their localization on the different tubular transport of ions in the kidney, with special regard to the potassium transport mechanism
AU Vogel, Guenther; Kroeger, Waltraud; Tervooren, Ursula
CS Biol. Inst. Madaus, Cologne, Germany
SO Pfluegers Archiv fuer die Gesamte Physiologie des Menschen und der Tiere (1963), 277(5), 502-12
CODEN: AGPPAS; ISSN: 0365-267X
DT Journal
LA Unavailable